

**DUAL INPUT AC and DC POWER SUPPLY HAVING A
PROGRAMMABLE DC OUTPUT UTILIZING SINGLE-LOOP OPTICAL
FEEDBACK**

5

ABSTRACT

A dual input AC/DC power converter (10) having dual inputs (12,14) adapted to receive both an AC and DC input and provide a selectable DC voltage output (16) and a second DC output (18). The dual input AC/DC power converter (10) comprises a power converter circuit (20) having an AC-to-DC converter (22),
10 a DC-to-DC booster converter (24), a feedback circuit (26), a filter circuit (25) and a DC-to-DC buck converter (28). Advantageously, the power converter (10) resolves many of the system management problems associated with carrying all of the different interface components necessary to power a wide variety of mobile products from either an AC or DC power supply. In addition, the feedback circuit
15 (26) comprises single feedback loop having stacked photocouplers, one (PH1) controlling the AC-to-DC converter (22) and the other (PH3) controlling the DC-to-DC booster converter (24), to select the overall DC output voltage.